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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,690	10/29/2003	Karl Lubitz	071308.0485	5269

31625 7590 11/04/2004

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AUSTIN, TX 78701-4039

EXAMINER

DOUGHERTY, THOMAS M

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/696,690

Applicant(s)

LUBITZ ET AL.

Examiner

Thomas M. Dougherty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-9 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 6-9 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "current conductor track having a width changing over its length" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 4, 6-9 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As no clear width changes are shown in the conducting element, the structure is uncertain.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 6, 9 and 21-23, as some of these best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Heinz (WO 00/63980). Heinz shows (fig. 1) an additional contacting system for a piezoelectric component (1) in the form of a multilayer structure, comprising more than one connecting element (6) for connecting the component (1) with an electrical connection element (7), and a single current conductor track (10), said connecting elements (6) comprising a single, structured component. Wherein each connecting element (6) is connected to the single current conductor track (10) having a width changing over its length. Note at the bottom of the conductor track (10) that it has a tail portion to which a connecting lead is attached and that portion is of a different width than the other part of the body of the single current conductor track.

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The additional contacting (5) is embodied as a single, structured foil.

The current conductor track (10) has a greater width compared to each connecting element (6).

The structured component comprises a contacting zone (edges of 2a) in which an electrical access element (2a) can be located.

The additional contacting (10) is surrounded in at least some areas by a passivation material, see 9 in figure 4 which is an elastomer.

As noted Heinz shows (fig. 1) an additional contacting system for a piezoelectric component (1) in the form of a multilayer structure, said system comprising a contacting element (5) comprising connecting elements (6) for connecting the component (1) with an electrical connection element (7), and a single conductor track (10), said connecting element (1), comprising a single structural flexible foil, wherein each connecting element (6) is connected to the single, current conductor track (10) having a width changing over its length.

As noted, Heinz shows a contact system for a piezoelectric component (1) in the form of a multilayered stack, said contact system (5) comprising multiple connecting elements 96) for connecting the component (1) with an electrical connection component (7), said connecting elements (6) comprised of a single structural component, and connected to the electrical connection component (7) in the are of the base of the stack. Whether or not the stack remains at rest during operation of the stack is a goal of the invention which is not supported by the claimed structural limitations and therefore carries no patentable weight.

The connecting elements (6) are comprised of a single flexible foil.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz (WO 00/63980) in view of Okamoto (US 6,104,129). Given the invention of Heinz as noted above, he does not note additional contacting formed in at least some areas from a material with higher electrical conductivity.

Okamoto shows (figs. 3, 5A, 5B) an additional contacting for an electrical component (20), especially for piezoelectric component (20) in the form of a multilayer structure, comprising more than one connecting element (27c) for connecting the electrical component (20) with an electrical connection element (understood or else the device cannot do any useful work), wherein the additional contacting (27c) is embodied as a single, structured component.

The additional contacting (27) is formed in at least some areas from a material with higher electrical conductivity.

The additional contacting (27) is formed from at least one material from the group Cu, Cu alloy, Fe, steel, Ni basic alloy, Co basic alloy. See column 4, lines 29 to 35.

It would have been obvious to one having ordinary skill in the art to employ the additional contacting in at least some areas from a material with higher electrical

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conductivity, the material being from the group Cu, Cu alloy, Fe, steel, Ni basic alloy, Co basic alloy, since these are taught by Okamoto as being examples of suitable materials for forming the external electrodes.

**Conclusion**

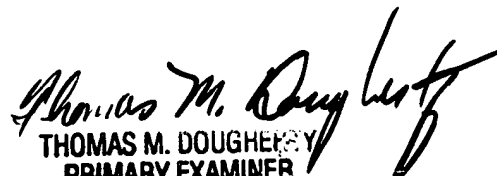
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Direct inquiry concerning this action to Examiner Dougherty at (571) 272-2022.

tmd  
tmd

October 28, 2004

  
THOMAS M. DOUGHERTY  
PRIMARY EXAMINER  
GROUP 2800